

DRAWINGS

FIG. 1

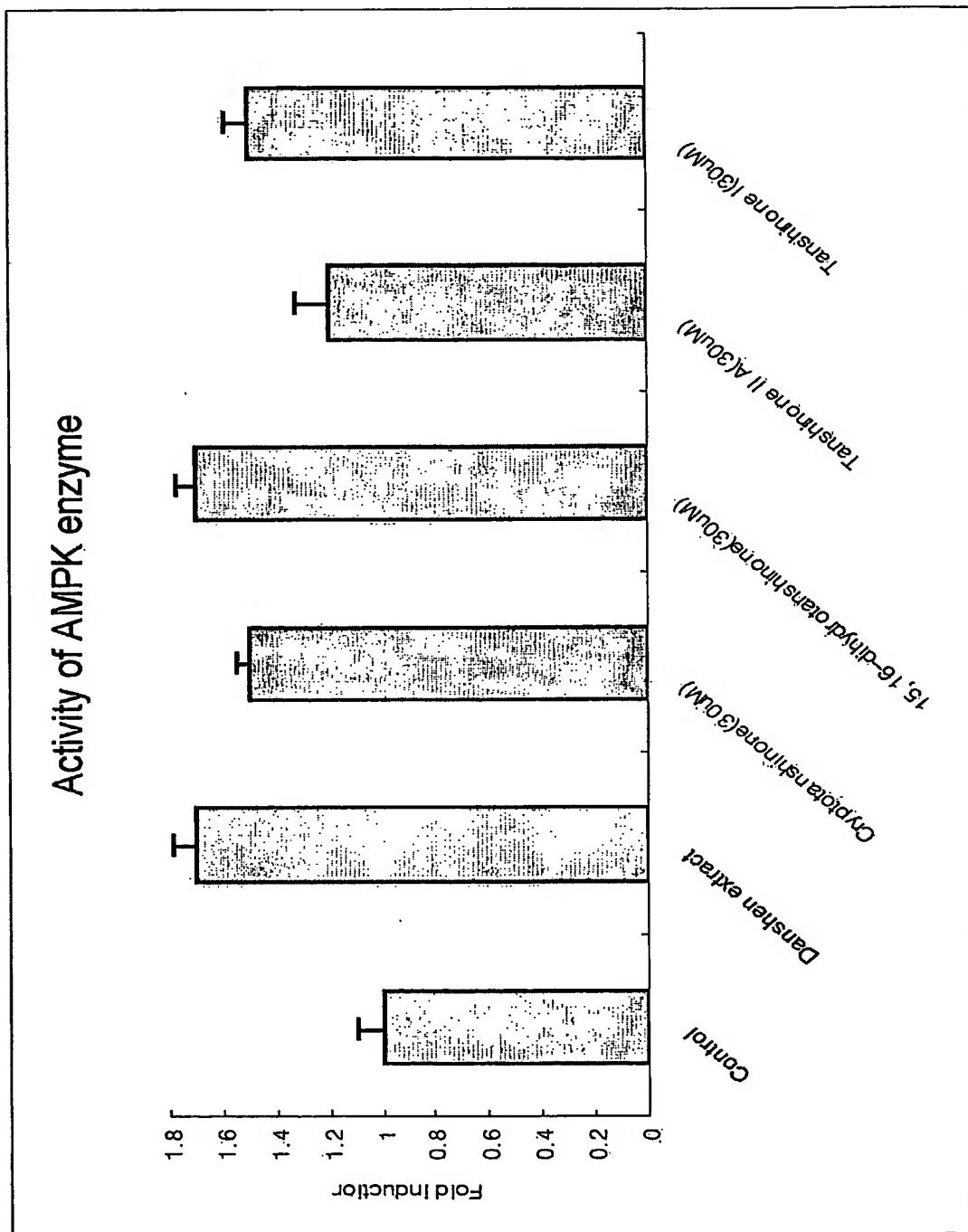
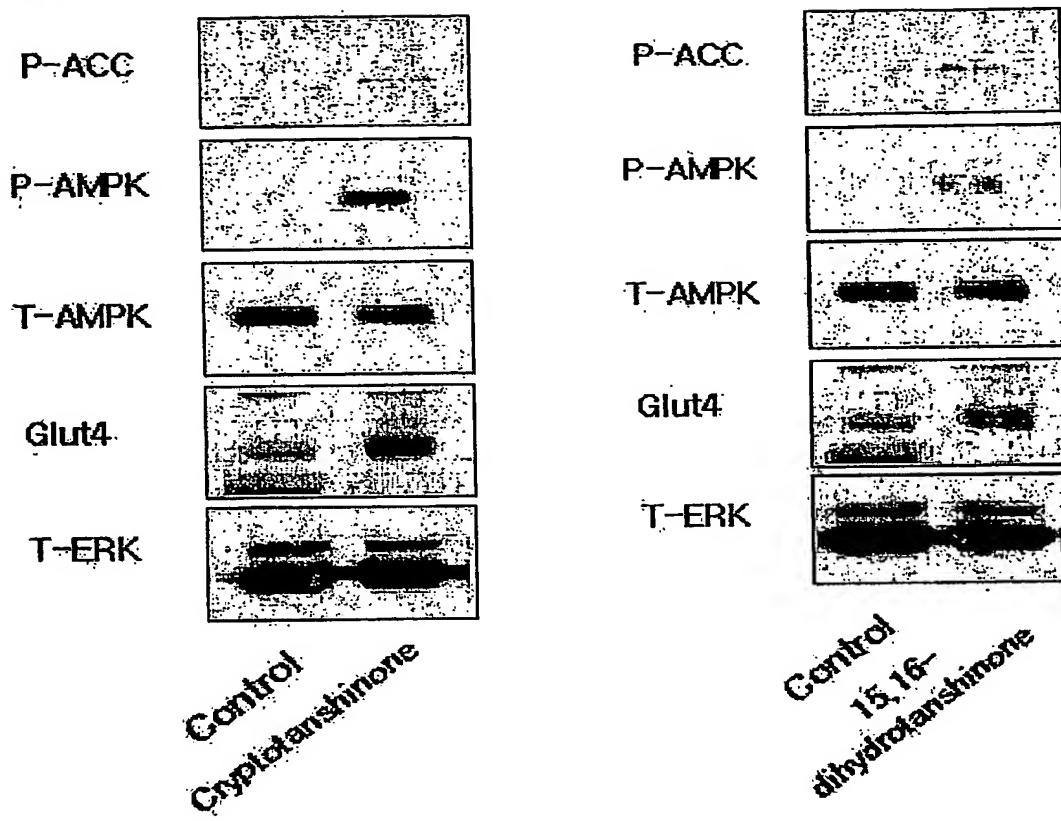


FIG 2



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FIG. 3

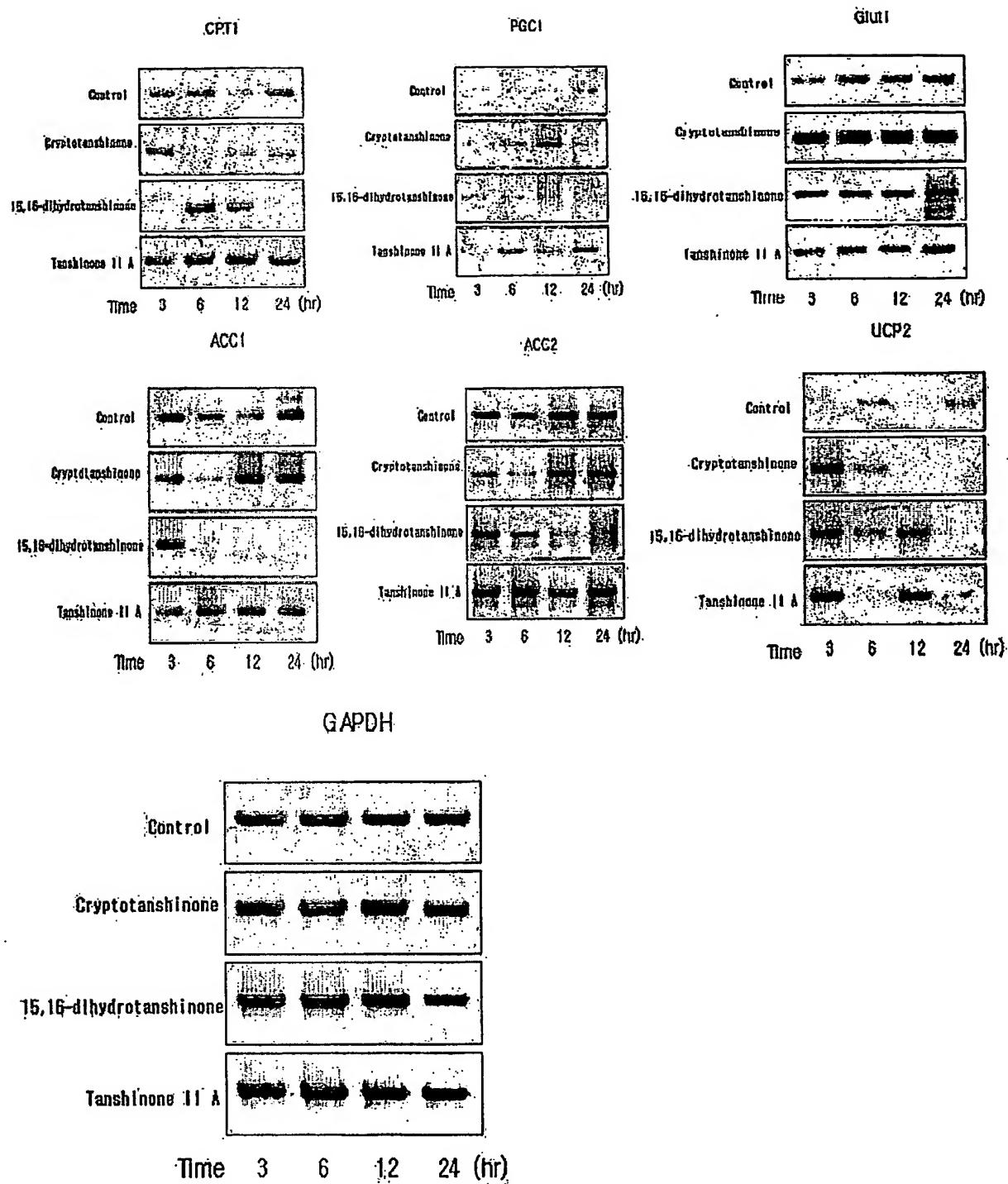


FIG. 4

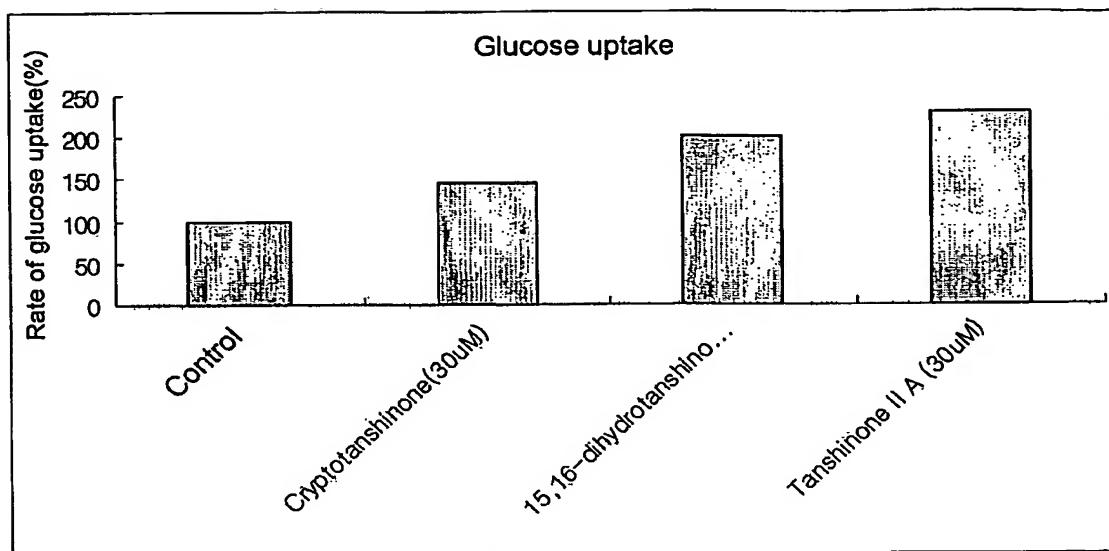
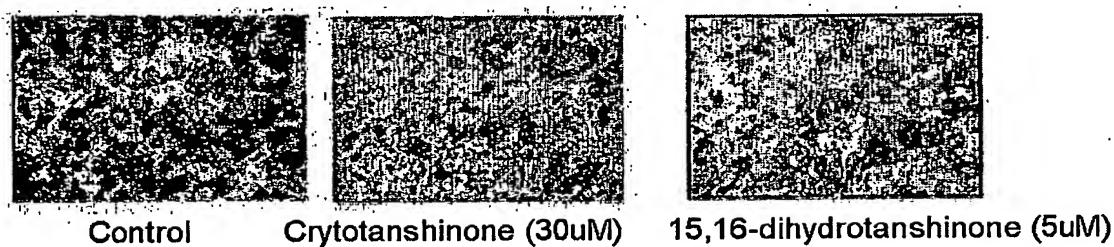


FIG. 5



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FIG. 6

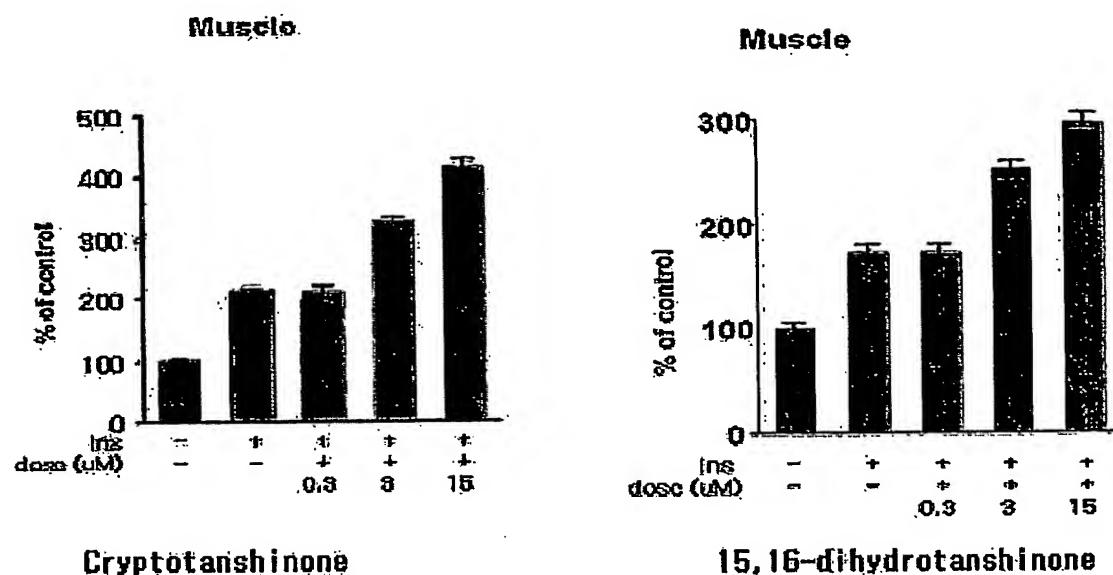
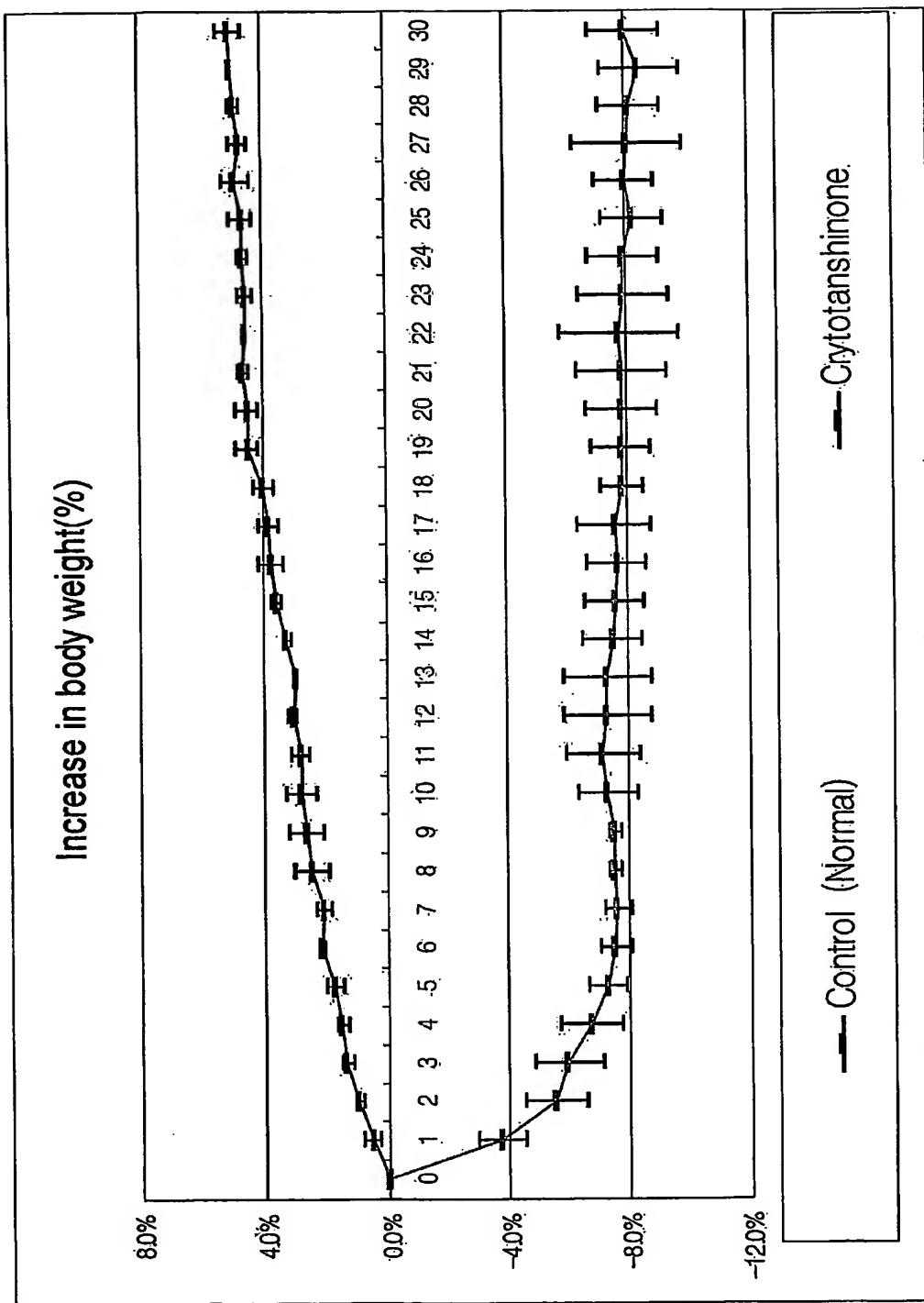


FIG. 7

	Initial body weight	Final body weight	Decrease in body weight(%)
Control	33±0.27	32.4±0.2	2±0.2
Cryptotanshinone	32±0.05	29.8±0.45	10±0.32
15,16-dihydrotanshinone	33±0.07	29±0.3	12±0.27

FIG 8



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FIG. 9

	Initial body weight(g)	Final body weight(g)	Decrease in body weight(%)
Control	50±0.23	52±0.5	-4±0.04
Cryptotanshinone	53±0.073	48.8±0.22	8±0.32
15,16-dihydrotanshinone	53±0.07	49±0.3	7±0.27
Tanshinone II A	52±0.25	47±0.3	9±0.01
Tanshinone I	54±0.4	50±0.05	7±0.24

FIG. 10

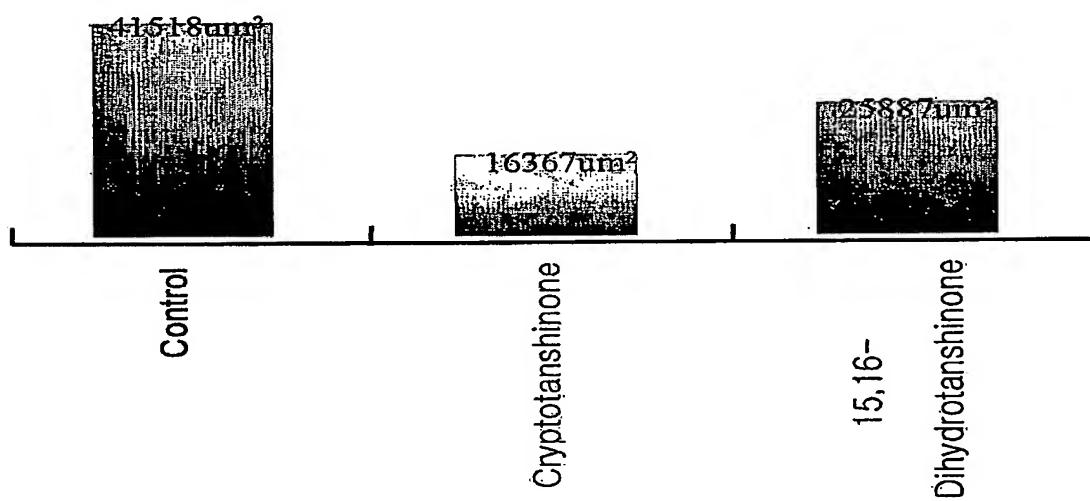


FIG. 11

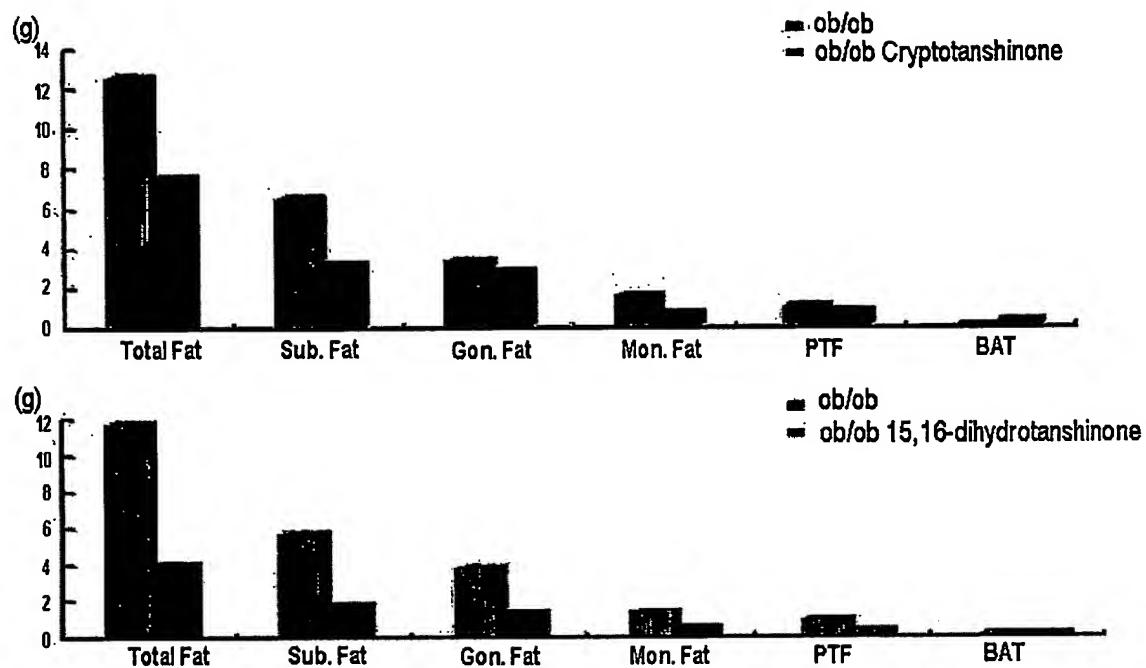


FIG. 12

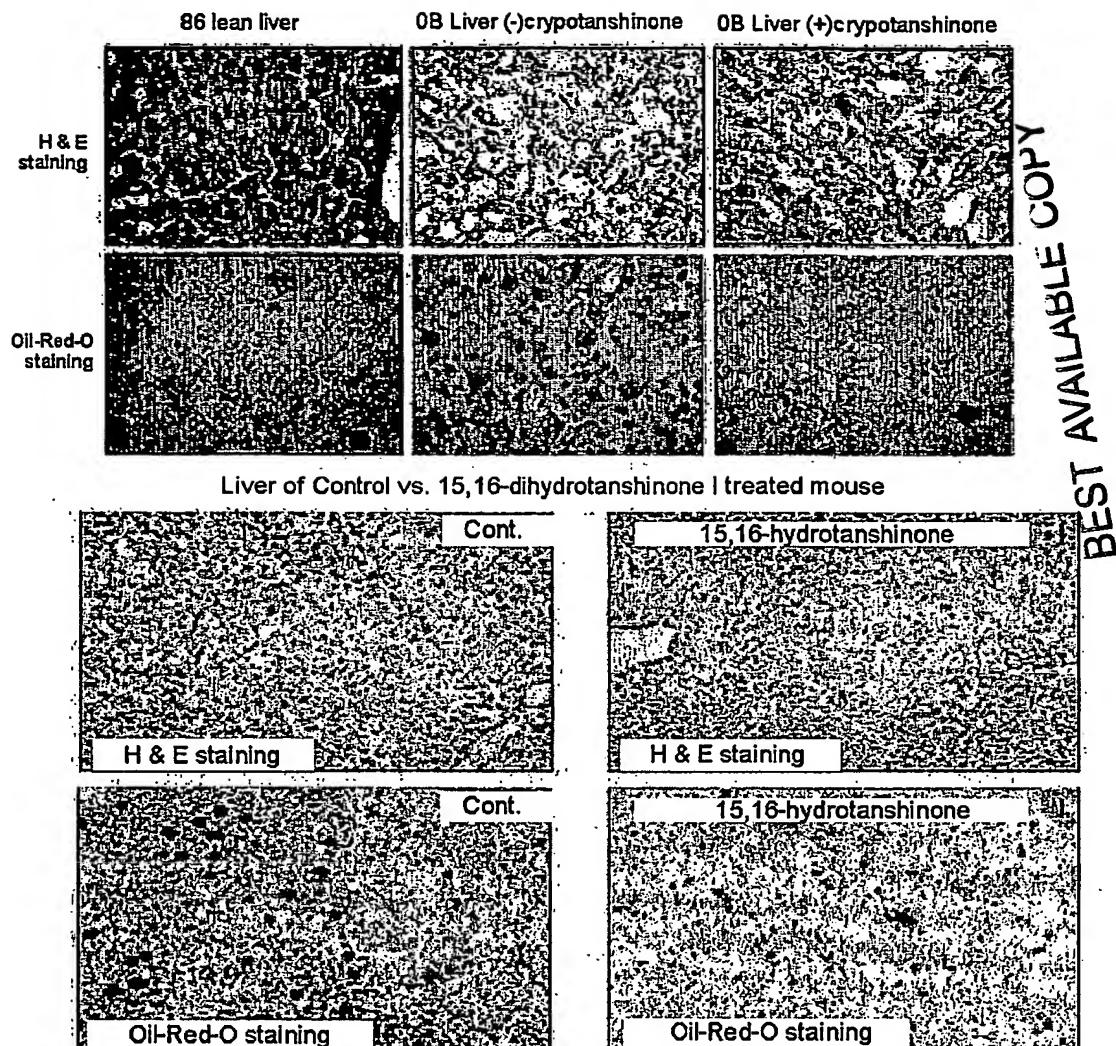


FIG. 13

	Control	Cryptotanshinone	15,16-dihydrotanshinone
Fat (g/g.liver)	0.21±0.03	0.15±0.08	0.18±0.06
Triglyceride (mg/g.liver)	86.3±19.5 ^{ab}	32.2±18.8 ^c	37.2±17.2 ^c
GOT(u/dL)	62.5±23.1 ^a	22.3±7.2 ^a	27.3±7.2 ^c
GPT(u/dL)	47.0±10.6 ^a	20.1±6.1 ^b	22.1±7.1 ^b
Cholesterol (mg/g.liver)	5.8±1.6 ^{ab}	5.6±2.9	5.6±2.9

FIG. 14

	Control	Cryptotanshinone	15,16-dihydrotanshinone
Triglyceride (mg/dL)	260.6±24.3 ^a	153.6±14.6 ^b	167.2±14.6 ^b
Cholesterol (mg/dL)	163.5±8.4 ^{ab}	120.1±72.1 ^b	135.1±73.1 ^b
Blood glucose(mg/dL)	168.4±55.0 ^{ab}	122.4±67.1 ^b	127.4±67.1 ^b

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FIG. 15

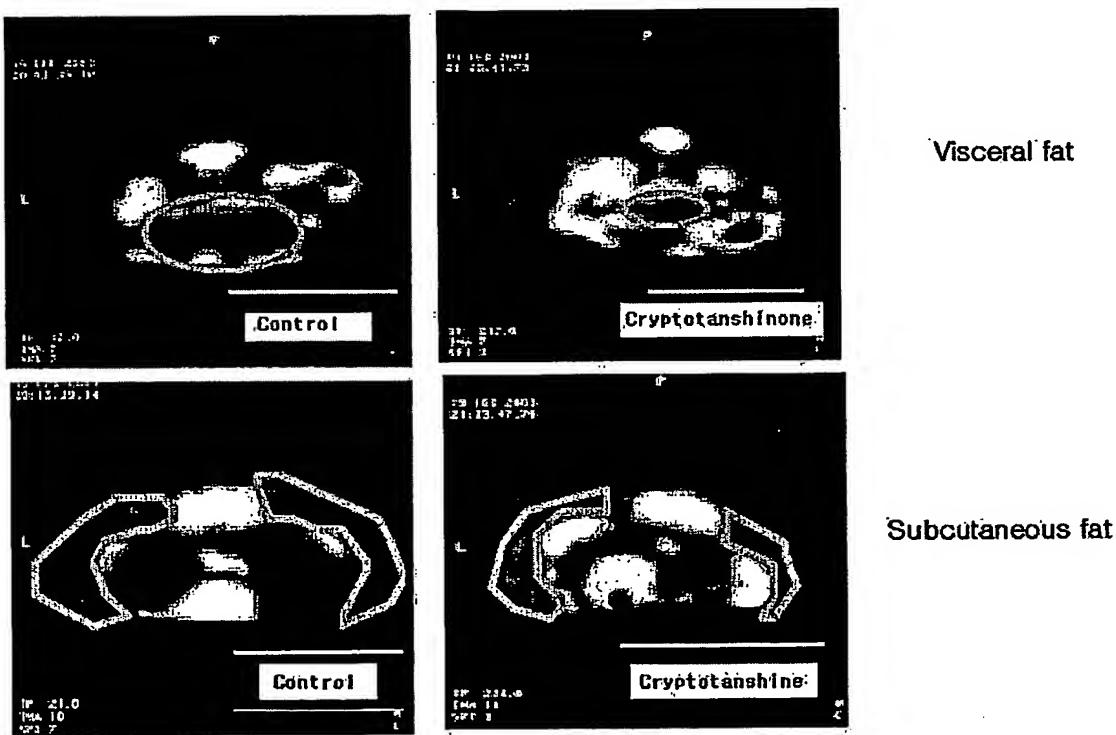


FIG. 16

	Initial blood glucose (mg/dl)	Final blood glucose (mg/dl)	Decrease in blood glucose (%)
Control	400±1.24	430±5.6	-7.5±0.2
Cryptotanshinone	400±2.56	200±4.7	50±0.33
15,16-dihydrotanshinone	410±0.6	250±4.9	61±0.89

FIG. 17

	Items	Con. (uM)	AMPK act..
1	DMSO	5%	1
	Tanshinone II A(5uM)+Tanshinone I (5uM)	10	1.7
	Tanshinone II A	10	1.4
	Tanshinone I	10	1.3
2	DMSO	5%	1
	Tanshinone II A(5uM) +Cryptotanshinone(5uM)	10	1.9
	Tanshinone II A	10	1.4
	Cryptotanshinone	10	1.5
3	DMSO	5%	1
	Tanshinone II A(5uM) +15,16-dihydrotanshinone(5uM)	10	2.0
	Tanshinone II A	10	1.4
	15,16-dihydrotanshinone	10	1.5
4	DMSO	5%	1
	Tanshinone I (5uM) +Cryptotanshinone(5uM)	10	1.9
	Tanshinone I	10	1.3
	Cryptotanshinone	10	1.6
5	DMSO	5%	1
	Tanshinone I (5uM) +15,16-dihydrotanshinone(5uM)	10	2.0
	Tanshinone I	10	1.3
	15,16-dihydrotanshinone	10	1.6
6	DMSO	5%	1
	Cryptotanshinone(5uM) +15,16-dihydrotanshinone(5uM)	10	2.2
	Cryptotanshinone	10	1.5
	15,16-dihydrotanshinone	10	1.6

FIG. 18

Items	Mixing ratio	Con. (uM)	AMPK activity
DMSO		5%	1
Tanshinone I + Cryptotanshinone	1:4	10	2.0
	1:1	10	1.8
	4:1	10	1.6
Tanshinone I + 15,16-dihydrotanshinone	1:4	10	2.3
	1:1	10	1.8
	4:1	10	1.7
Cryptotanshinone + 15,16-dihydrotanshinone	1:4	10	2.3
	1:1	10	2.0
	4:1	10	2.0

FIG. 19

	Items	Con. (μ M)	AMPK activity
1	DMSO	5%	1
	Tanshinone II A(3.3 μ M) + Tanshinone I (3.3 μ M) + Cryptotanshinone(3.4 μ M)	10	1.8
	Tanshinone II A	10	1.4
	Tanshinone I	10	1.3
	Cryptotanshinone	10	1.5
2	DMSO	5%	1
	Tanshinone II A(3.3 μ M) + Tanshinone I (3.3 μ M) + 15,16-dihydrotanshinone(3.4 μ M)	10	1.9
	Tanshinone II A	10	1.4
	Tanshinone I	10	1.3
	15,16-dihydrotanshinone	10	1.6
3	DMSO	5%	1
	Tanshinone I (3.3 μ M) + Cryptotanshinone(3.3 μ M) + 15,16-dihydrotanshinone(3.4 μ M)	10	2.1
	Tanshinone I	10	1.3
	Cryptotanshinone	10	1.6
	15,16-dihydrotanshinone	10	1.7
4	DMSO	5%	1
	Cryptotanshinone(3.3 μ M) + 15,16-dihydrotanshinone(3.4 μ M) + Tanshinone II A(3.3 μ M)	10	2.2
	Cryptotanshinone	10	1.6
	15,16-dihydrotanshinone	10	1.7
	Tanshinone II A	10	1.4

FIG. 20

Composition rate		Initial body weight (g)	Final body weight (g)	Decrease in body weight(%)
Tetrahydrophe-nanthrene deriv.	Phenanthrene derivative			
10	0	51.3±0.86	50.5±0.62	1.5
10	1	50.6±0.92	49.6±1.2	2
5	1	51.4±0.85	48.7±0.83	5.3
2.5	1	52.3±0.74	47.8±1.1	8.6
1	1	49.8±0.95	43.6±2.3	12.5
1	2.5	50.2±0.74	44.4±1.8	11.5
1	5	48.8±0.93	44.88±1.5	8.2
1	10	51.8±0.68	48.54±1.9	6.3
0	10	50.8±0.73	47.96±0.69	5.6
Control		49.8±0.84	51.89±1.2	-4.2